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TECOMA PROJECT - NOTICE OF INTENT

SUPPLEMENT TO TECHNICAL MEMORANDA ON VEGETATION, SOILS, AND WILDLIFE

Prepared for
Tecoma Joint Venture
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1.0 INTRODUCTION

The Tecoma Project site was visited on May 31 to June 2, 1984 to supplement studies conducted late the previous fall. The purpose of this visit was to 1) conduct vegetational surveys during the growing season, 2) collect and survey the project site for a floristic plant list and for the presence of threatened and endangered plant species, 3) survey soils on the mine site for depths and suitability for reclamation use, and 4) supplement wildlife observations.

2.0 VEGETATION

Vegetation was surveyed by using 30-meter-long linear transects along which species presence and cover could be determined. The entire project site supports a Great Basin steppe-type shrub vegetation dominated by black sagebrush, which forms 50 percent of the total cover (see Table S-1). Locally on surfaces where gophers or kangaroo rats have burrowed, hopsage, winterfat and rabbitbrush have equal cover with black sagebrush. In draws with a deeper soil, big sagebrush replaces black sagebrush as the dominant shrub. This occurs on only a small portion of the mine site.

Grasses form only 11 percent of the total perennial plant species cover (Table S-1), except for the introduced annual cheatgrass, which in a wet year such as 1983-84 has an average of 30 percent cover over the entire site, and in some areas may cover as much as 80 percent of the soil surface. Since it is an annual, cheatgrass was not included in Table S-1, but in the early summer it has extensive cover on disturbed sites or areas with fine soil and reduced shrub cover.

A floristic list of plant species present on the project site is given in Table S-2. Common plant species were identified in the field and plant specimens were collected for identification and verification in a herbarium. None of the plants collected and identified are listed as threatened or endangered in Utah. There are no areas with a unique or

different habitat or substrate that would support a rare or endangered species.

3.0 SOILS

Four soil profiles were examined on the mine site to determine topsoil availability and suitability for reclamation. Soils on the mine site are variable because the substrate varies from exposed rock on the upper southwest edge to six feet or more of alluvium in the draw that bisects the mine site. The soils on the slopes are unsuitable because of shallow depths to bedrock and large amounts of stones and gravel. The top 20 inches of the soils in the draw is suitable as topsoil. The area in the draw with suitable topsoil encompasses 4.5 acreas of the 14.8-acre mine site. Thus a total of 7.5 ac-ft of topsoil is suitable for removal and storage as topsoil for reclamation. This soil material will be removed during pre-stripping of the mine and will be stockpiled with the soil from the leach pads and mine overburden dump.

4.0 WILDLIFE

The project area is dry with no permanent streams or springs. There are no unique animal habitats. The animals present onsite and in the surrounding area are wide-ranging tolerant species typical of the Great Basin. No threatened or endangered species of animal or bird was observed in the project area.

Deer are the most common large herbivore in the vicinity of the project site. Solitary deer were observed immediately south of the site, and deer sign (scat) was seen fairly commonly on the project site. The deer are a fairly wide-ranging species and cross and browse a wide area. They prefer a habitat with broken terrain and some cover. Two antelope were seen about 2 miles south of the project site on lower, more open ground. Antelope might occasionally cross the project site, although

they prefer more open, level terrain. No other large animals were seen or are expected in the vicinity of the project site.

Small animals are more common in the sagebrush habitat. Black-tailed jackrabbits are the most abundant animal onsite and in the area. Cottontail rabbits were observed in larger draws with better cover by big sagebrush. Two animals fairly common on flat areas are pocket gophers, who tunnel and bring large amounts of subsoil to the surface; and kangaroo rats, who also excavate dens and pile mounds of soil on the surface. Other animals expected or observed from signs are coyotes (scat), badgers (burrows), chipmunks and deermice.

Birds observed onsite in the early summer season were sage grouse, ravens, horned larks and sage sparrows. Sage grouse are common to the north of the site on the dissected uplands above the old lake strand line. Other birds expected or seen in the vicinity are vultures, golden eagles, and marsh hawks.

TABLE S-1

VEGETATION COVER (in percent, based on 13 transects)

TECOMA PROJECT

Species	Cover Value Mean	Standard Deviation	Range in values
Artemisia nova	13.5	±8.3	1.0 to 27.3
Chrysothamnus viscidiflorus	2.7	±2.7	0 to 5.1
Atriplex confertifolia	2.5	±2.0	0 to 6.3
Grayia spinosa	1.7	±2.8	0 to 9.9
Ceratoides lanata	1.0	±1.7	0 to 5.3
Poa nevadensis	1.0	±1.0	0 to 3.4
Tetradymia spinosa	1.0	±1.4	0 to 3.8
Oryzopsis hymenoides	0.9	±0.6	0 to 1.9
Sitanion hystrix	0.8	±0.8	0 to 2.5
Artemisia spinescens	0.5	±0.6	0 to 1.3
Poa secunda	0.3	±0.4	0 to 1.0
Ephedra nevadensis	0.3	±0.8	0 to 2.7
Other species	1.0	-	0 to 3.8
Total Average Cover	27.2	±5.7	17.8 to 36.0

Bromus Tectorum cheatgrass $\frac{30.0}{57.2}$

N_{min} @ 80%/10% = 7.2

@ 90%/10% = 11.81

TABLE S-2
PLANT SPECIES LIST
TECOMA PROJECT
BOX ELDER COUNTY, UTAH

Scientific Name	Common Name
Trees	
Juniperus utahensis	Utah juniper
Shrubs	
Artemisia nova	black sagebrush
Artemisia spinescens	spiny sage
Artemisia tridentata	big sagebrush
Atriplex confertifolia	shadscale
Ceratoides lanata	winterfat
Chrysothamnus viscidiflorus	viscid rabbitbrush
Ephedra nevadensis	Nevada joint-fir
Grayia spinosa	hopsage
Gutierrezia sarothrae	snakeweed
Tetradymia spinosa	spiny horsebrush
Cactus	
Opuntia polyacantha	prickly pear
Grasses	
Agropyron spicatum	bluebunch wheatgrass
Bromus tectorum	cheatgrass
Elymus glauca	blue wildrye
Poa nevadensis	Nevada bluegrass
Poa secunda	sandberg bluegrass
Oryzopsis hymenoides	Indian ricegrass
Sitanion hystrix	squirreltail

Forbs

Agoseris glauca	false dandelion
Allium atrorubens	wild onion
Arabis holboellii	rock cress
Astragalus iodanthus	loco weed
Astragalus lentigenosus	rattlesnake weed
Astragalus utahensis	loco weed
Castilleja chromosa	Indian paintbrush
Caulanthus crassicaulis	squaw cabbage
Cryptantha echinella	cryptantha
Cryptantha flavoculata	miner's candle
Cymopterus acaulis	dwarf cymopterus
Delphinium nelsonii	larkspur
Descurainia pinnata	tansy mustard
Erigeron caespitosus	dwarf fleabane
Erigeron engelmanii	daisy
Eriogonum ovalifolium	buckwheat
Erysimum inconspicuum	wallflower
Lappula redowskii	beggar ticks
Lepidium perfolatum	pepper grass
Leptodactylon pungens	prickly gilia
Lewisia redivivia	bitterroot
Lomatium ambiguum	desert parsley
Mertensia oblongifolia	bluebells
Nemophila pedunculata	baby blue eyes
Oenothera caespitosa	primrose
Penstemon eriantherus	beard tongue
Phlox hoodii	phlox
Phlox longifolia	phlox
Sphaeralcea munroana	mallow
Stenotus acaulis	goldflower